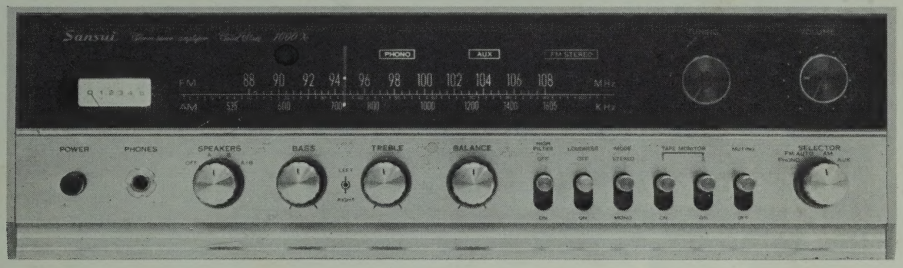
SERVICE MANUAL

SOLID-STATE AM/FM STEREO TUNER AMPLIFIER

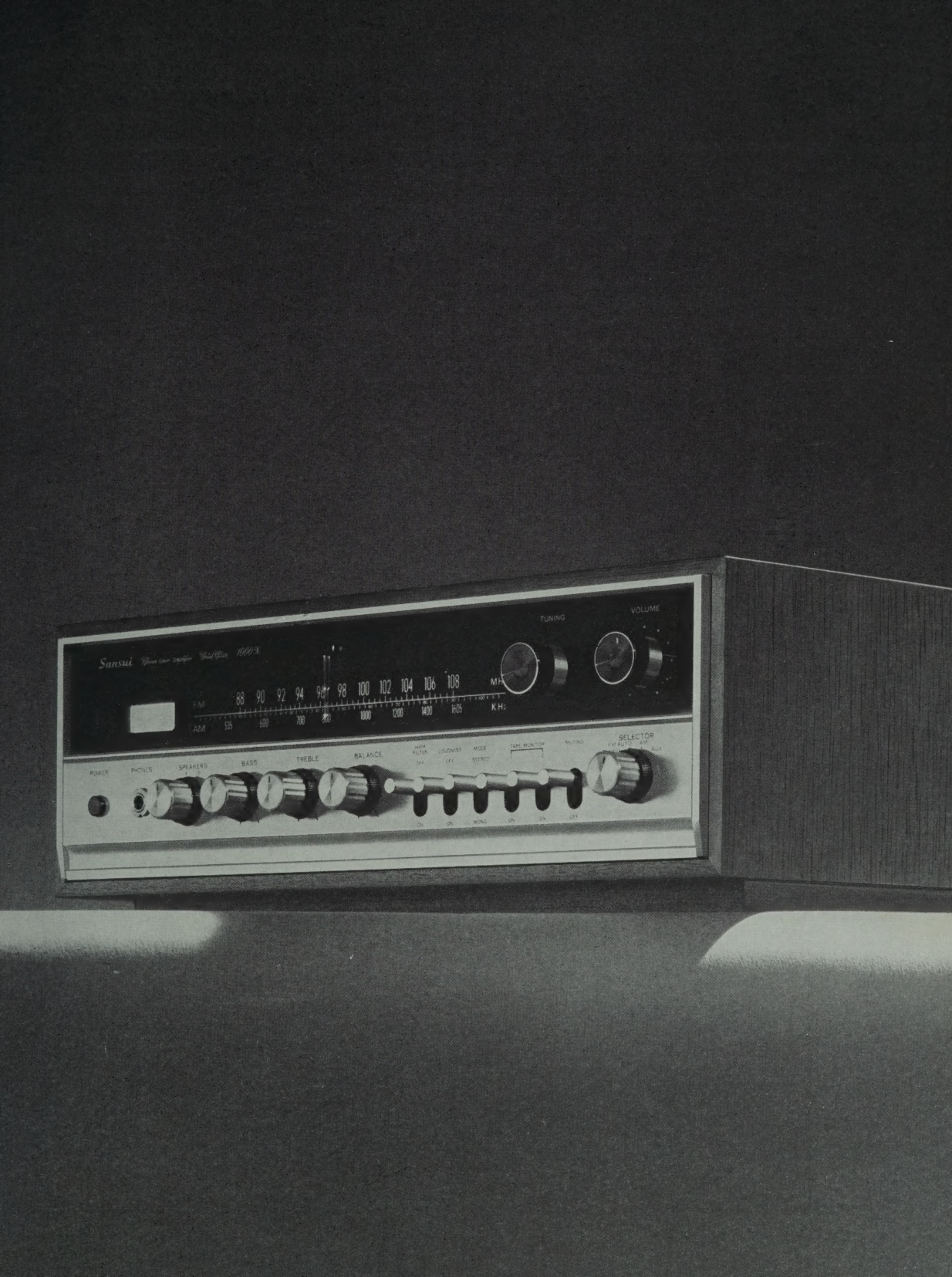
SANSUI 1000X



Sansui

SANSUI ELECTRIC COMPANY LIMITED

CONTENTS


Sansui
TUNING
VOLUME
FM
AM
88 90 92 94 96 98 100 102 104 106 108
MHz
535 600 700 800 1000 1200 1400 1625
KHz
POWER
PHONES
SPEAKERS
BASS
TREBLE
BALANCE
SELECTOR

GENERAL TROUBLESHOOTING CHART

If the amplifier is otherwise operating satisfactorily, the more common causes of trouble may generally be attributed to the following:

1. Incorrect connections or loose terminal contacts. Check the speakers, record player, tape recorder, antenna and line cord.
2. Improper operation. Before operating any audio component, be sure to read the manufacturer's instructions.
3. Improper location of audio components. The proper positioning of components, such as speakers and turntable, is vital to stereo.
4. Defective audio components.

The following are some other common causes of malfunction and what to do about them:

PROGRAM	SYMPTOM	PROBABLE CAUSE	WHAT TO DO
AM, FM or MPX reception	A. Constant or intermittent noise heard at times or in a certain area	* Discharge or oscillation caused by electrical appliances, such as fluorescent lamp, TV set, D.C. motor, rectifier or oscillator * Natural phenomena, such as atmospherics, statics or thunderbolts * Insufficient antenna input due to ferroconcrete wall or long distance from the station * Wave interference from other electrical appliances	* Attach a noise limiter to the electrical appliance causing the noise, or attach it to the amplifier's power source * Install an outdoor antenna and ground the amplifier to raise the signal-to-noise ratio * Reverse the power cord plug-receptacle connections * If the noise occurs at a certain frequency, attach a wave trap to the ANT. input * Keep the set at a proper distance from other electrical appliances
	B. The needle of the tuning meter does not move sharply	* Receiver is located in a weak signal area	* Place the set to receive maximum signal strength
	C. The zero point of the meter diverges much	* Regional difference in field intensity.	* The unit is not at fault
AM reception	A. Noise heard at a particular time of a day, in a certain area or over part of dial	* Due to the nature of AM broadcasts	* Install the antenna for maximum antenna efficiency. See "ANTENNA" in the operating instructions * In some cases, the noise can be eliminated by grounding the amplifier or reversing the power cord plug-receptacle connections
	B. High-frequency noise	* Adjacent-channel interference or beat interference * TV set too close to audio system	* Although such noise cannot be eliminated by the amplifier, it is advisable to adjust the TREBLE control from midpoint to left and switch on the HIGH FILTER * Keep the TV set at a proper distance from the audio system
FM reception	A. Noisy	* Poor noise limiter effect or too low S/N ratio due to insufficient antenna input Note: FM reception is affected considerably by transmission conditions of stations: power and antenna efficiency. As a result, you may receive one station quite well while receiving another station poorly	* Install the antenna (supplied) for maximum signal strength * If this does not prove effective, use an outdoor antenna designed exclusively for FM. When you use a TV antenna for both TV and FM with a splitter, make sure TV reception is not affected * An excessively long antenna may cause noise

PROGRAM	SYMPTOM	PROBABLE CAUSE	WHAT TO DO
FM reception (cont'd)	B. A series of pops is heard	* Ignition noise caused by an automobile engine	* Install the antenna and its lead-in wire in proper distance from the road or raise the antenna input as described above
	C. Tuning noise between stations	* This results from the nature of the FM reception. As the station signal becomes weak, the noise limiter effect is decreased, and the amplification of the limiter, in turn, is enlarged, generating a noise	* Turn the MUTING switch on. It reduces the sensitivity, and therefore it should be used sparingly
FM-MPX reception	A. Noise heard during FM-MPX reception while not heard during FM mono reception	* Weaker signal because the service area of the FM-MPX broadcast is only half that of the FM mono broadcast	* Install the antenna for maximum antenna input * Switch on the HIGH FILTER and/or turn the TREBLE control from midpoint, left
	B. Clearness of channel separation is decreased during reception	* Excess heat	* Circulation of air is important to the amplifier. Be sure that air is flowing under the amplifier
	C. The stereo indicator blinks on and off	* Interference	* The indicator is not at fault. Adjust VR_{401}
	D. The stereo indicator blinks on and off even though stereo station is not received	* Interference	* The indicator is not at fault. Adjust VR_{401}
Record playing or tape playback	A. Hum or howling	* Record player placed directly on speaker * Wire other than shielded wire used * Loose terminal contact * Shielded wire too close to line cord, fluorescent lamp or other electrical appliances * Nearby amateur radio station or TV transmission antenna	* Place a cushion between the player and the speaker box or place them away from each other * The connecting shielded wire should be as shord as possible * Turn the BASS control from midpoint to left * Consult the nearest Radio Regulatory Bureau
	B. Surface noise	* Worn or old record * Worn stylus * Stylus dusty * Improper stylus pressure * Worn playback head	* Switch on the HIGH FILTER and turn the TREBLE control from midpoint to left * Clean or replace the stylus * Replace the playback head.
All stereo programs	BALANCE control is not at midpoint when equal sound comes from left and right channels	* It is important to adjust for equal sound from both channels. It should not always be set to the midpoint	* Set the MODE switch to MONO and then set the BALANCE control to a position where equal sound comes from both channels

CUSTOM MOUNTING

How to Install the Amplifier in a Wooden Cabinet

1. Make a cabinet window of 392mm or $15^{7}/_{16}$″ in width and 110mm or $4^{21}/_{64}$″ in height.

2. Place two square pieces of wood (20×20×210mm or $^{25}/_{32}$″×$^{25}/_{32}$″×$8^{17}/_{64}$″) for supporting the amplifier in the bottom board of the cabinet.

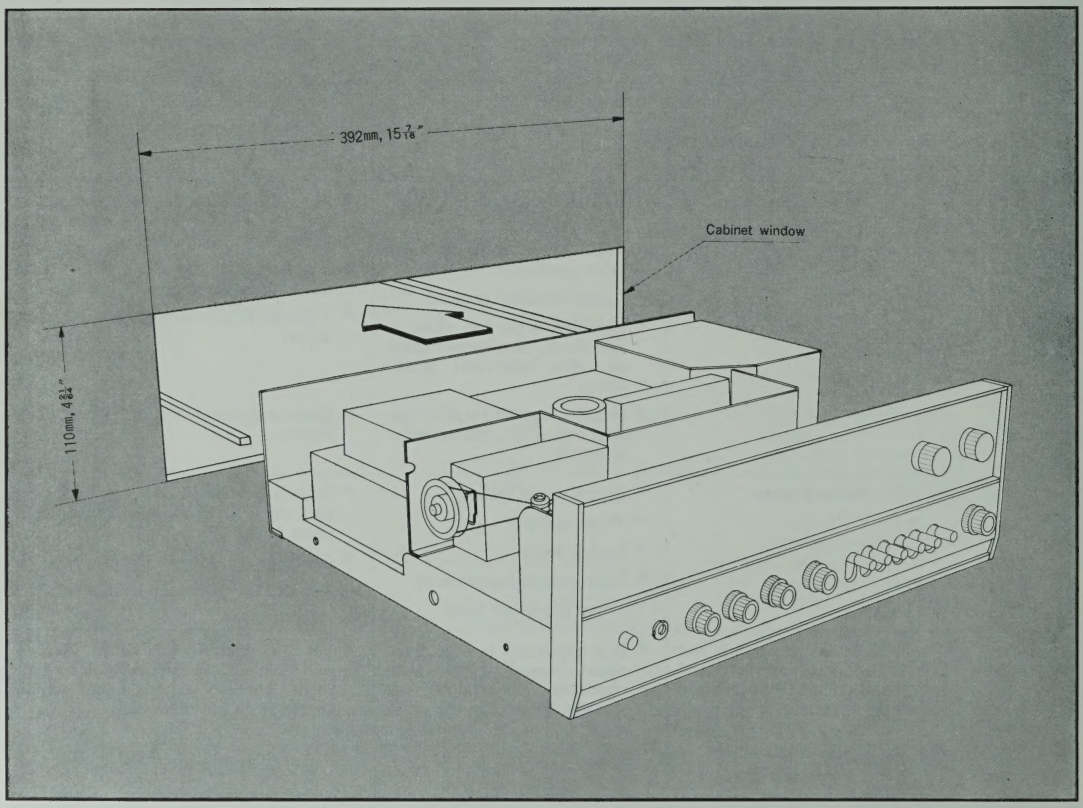
3. Cut two holes four attachment bolts in the bottom board of the cabinet.

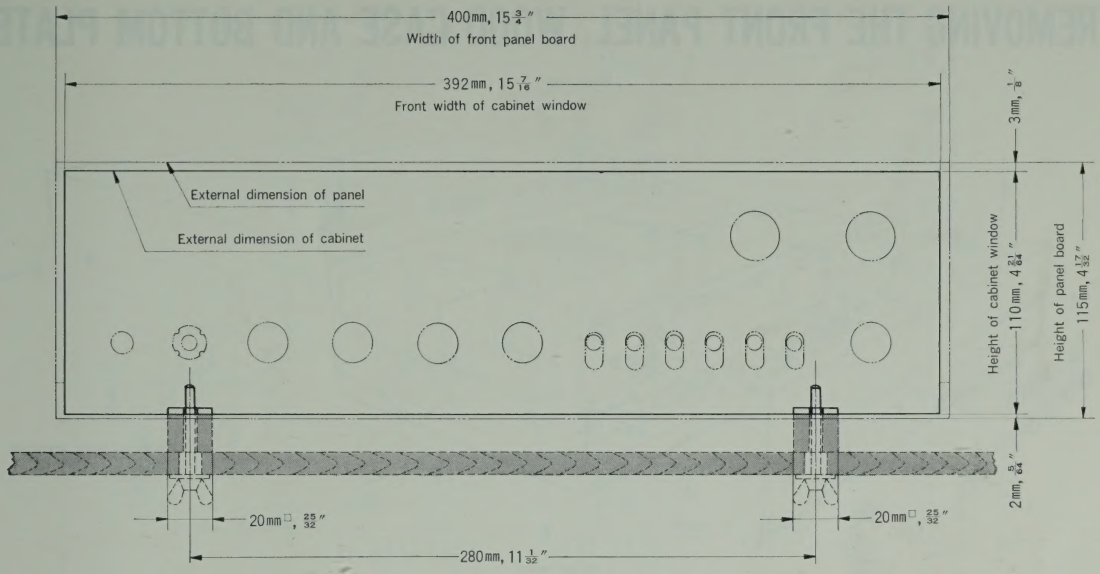
4. Remove the amplifier from the wood case (Refer to the section entitled "DISASSEMBLY PROCEDURE").

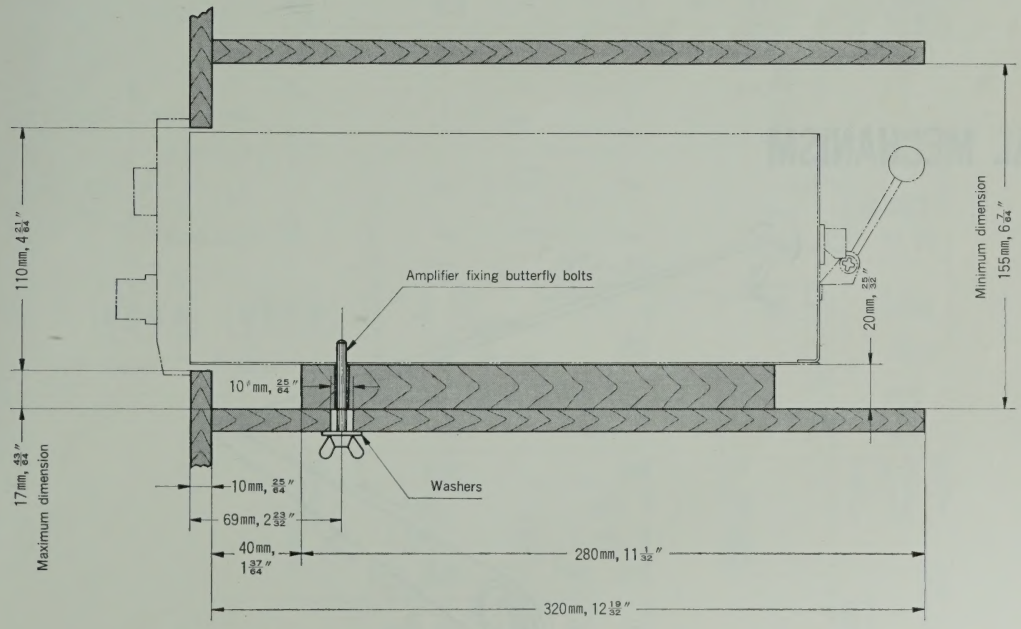
5. Place the amplifier in position through the cabinet window.

6. Make sure the amplifier is in position, then put the washers in butterfly bolts (4×40mm) and fix the amplifier to the cabinet with the butterfly bolts.

Note: When the amplifier is built into the custom cabinet, the wood case assembly including screws and washers is not used. Retain it for future use.

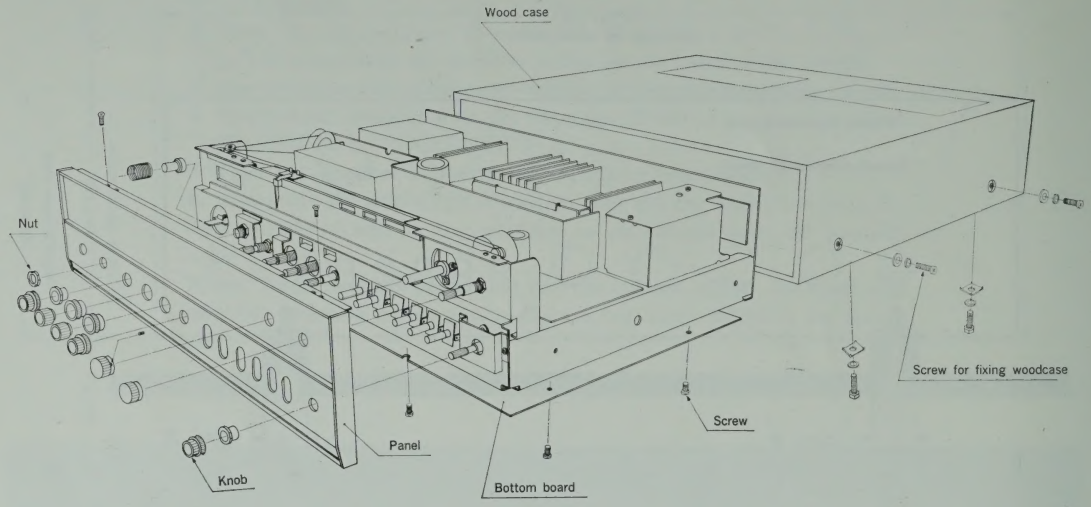



400mm, 15 3/4"
Width of front panel board
392mm, 15 7/16"
Front width of cabinet window
3mm, 1/8"
External dimension of panel
External dimension of cabinet
Height of cabinet window
110mm, 4 21/64"
Height of panel board
115mm, 4 17/32"
2mm, 5/64"
20mm□, 25/32"
20mm□, 25/32"
280mm, 11 1/32"

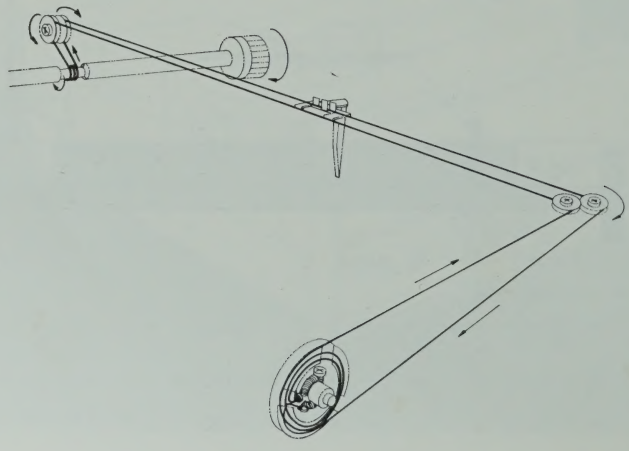

110mm, 4 21/64"
Amplifier fixing butterfly bolts
20mm, 25/32"
Minimum dimension
155mm, 6 7/64"
10mm, 25/64"
17mm, 43/64"
Maximum dimension
Washers
10mm, 25/64"
69mm, 2 23/32"
40mm, 1 37/64"
280mm, 11 1/32"
320mm, 12 19/32"

DISASSEMBLY PROCEDURE

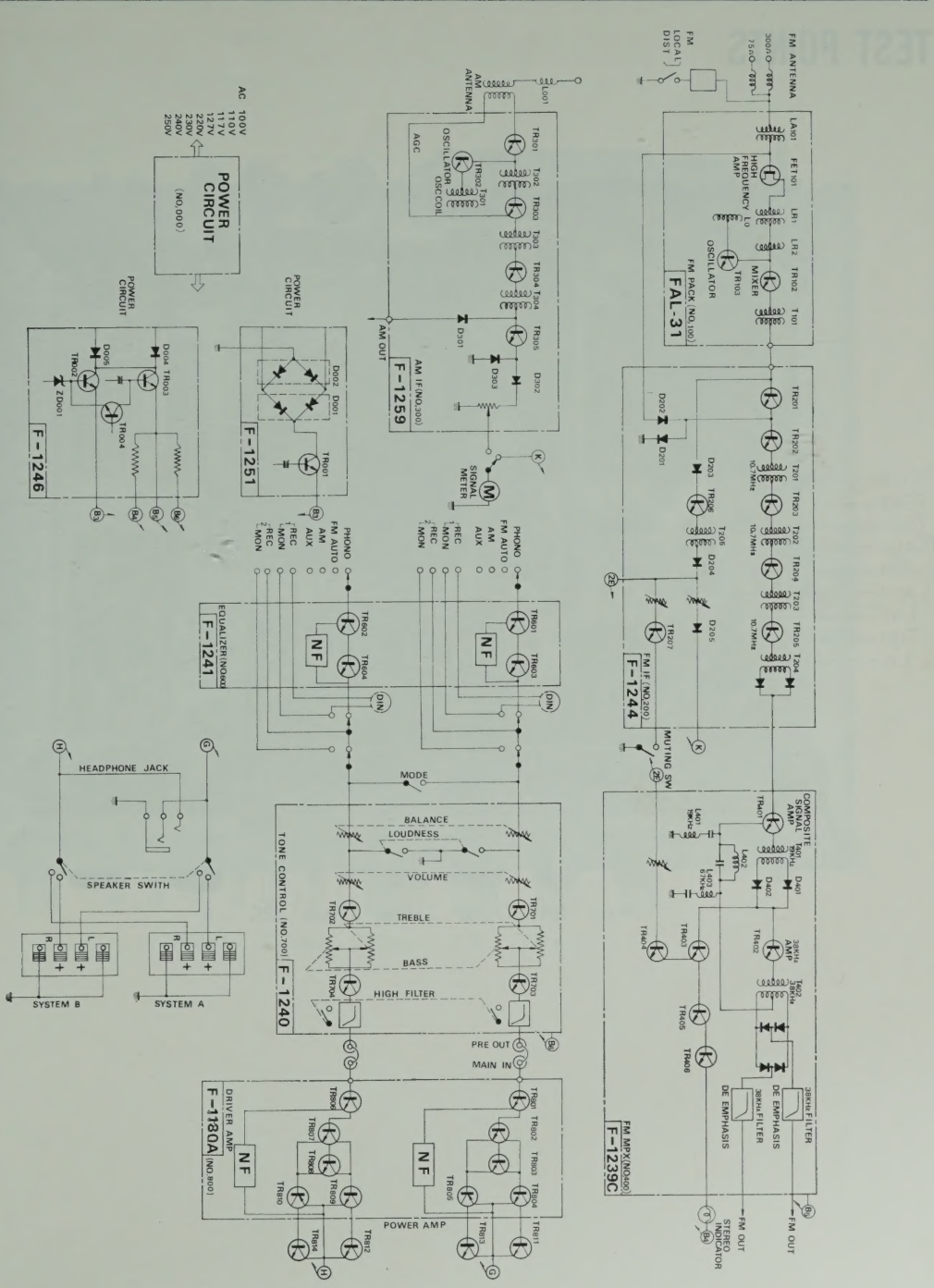
REMOVING THE FRONT PANEL, WOOD CASE AND BOTTOM PLATE



DIAL MECHANISM

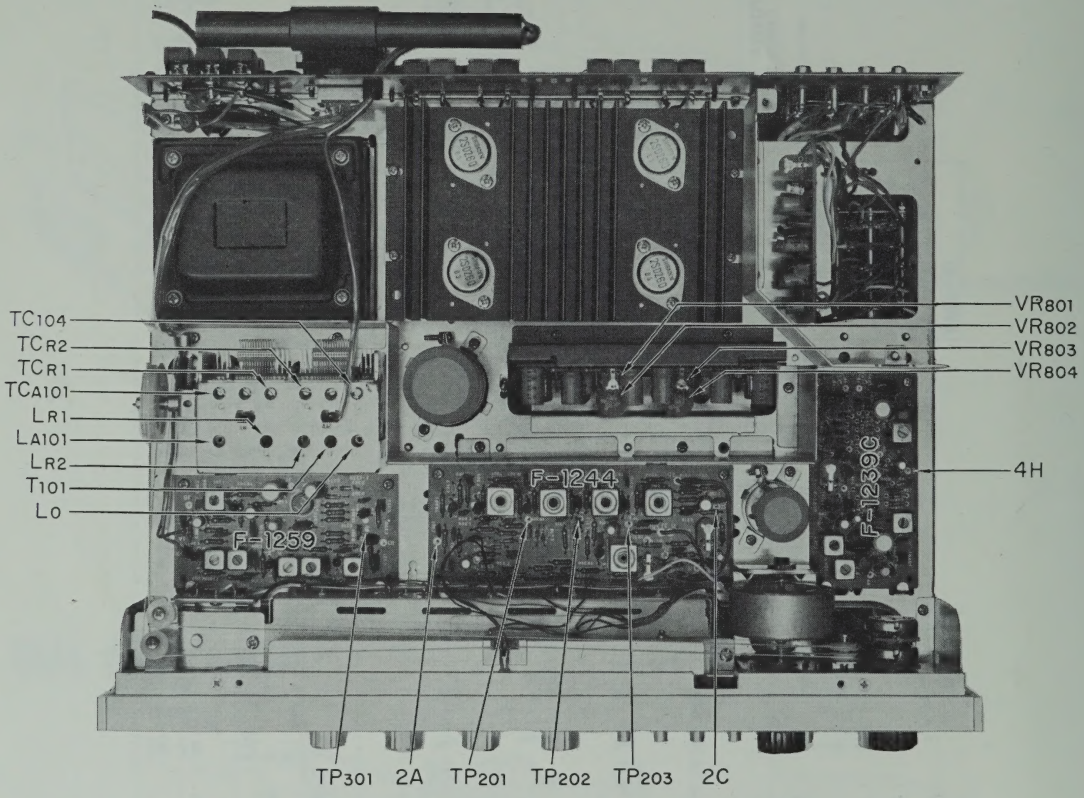


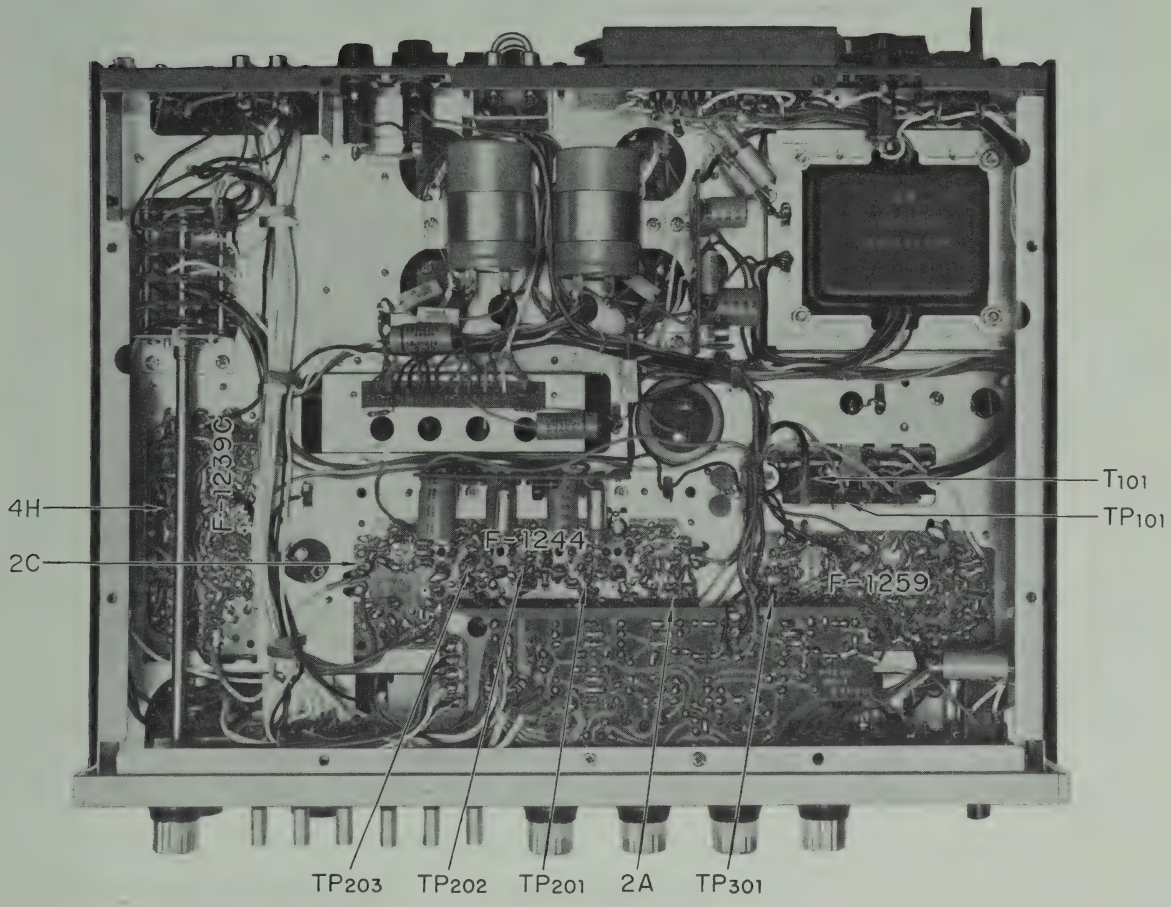
BLOCK DIAGAM



ALIGNMENT

TEST POINTS




F-1239
F-1244
F-1259
4H
2C
T101
TP101
TP203
TP202
TP201
2A
TP301

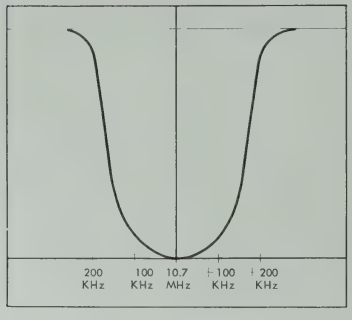
ALIGNMENT

FM ALIGNMENT PROCEDURE

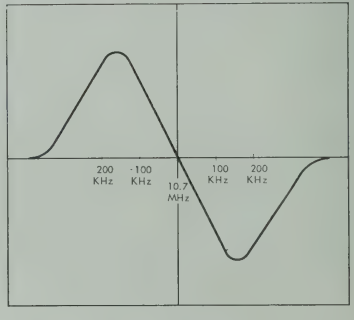
NOTE: To align, set the EM signal generator level to minimum turn tuning gang fully, center carrier wave, and set pointer to reference mark.

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	DIAL SETTING	ADJUST	ADJUST FOR
1.	IF Transformer	10.7 MHz ±200 kHz	Sweep signal is sent to TP_{101} via the 10pF ceramic capacitor	Oscilloscope is connected to TP_{201}, TP_{202} and TP_{203} via the 0.02μF ceramic capacitor		Primary and secondary sides of T_{201}, T_{202}, and T_{203}	Best I.E.T. wave form
2.	Discriminator	10.7 MHz ±200 kHz	Sweep signal is sent to 2A via the 0.02μF ceramic capacitor	Oscilloscope is connected to 2C via the 0.05μF capacitor		FM Discriminator T_{204} primary and secondary	S curve
3.	O.S.C	88 MHz 400 Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	88 MHz	O.S.C. coil L_0	Maximum
4.	O.S.C	108 MHz 400 Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	108 MHz	O.S.C. trimmer TC_{104}	Maximum
5.	Repeat 3&4						
6.	RF Amp. Circuit	90 MHz 400 Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	90 MHz	Antenna Coil LA_{101}, LR_1 and LR_2	Maximum
7.	RF Amp. Circuit	106 MHz 400 Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	106 MHz	Trimmer TCA_{101}, TC_{R1} and TC_{R2}	Muximum
8.	Repeat 6 & 7						

FM IF CHARACTERISTIC



FM DISCRIMINATOR CHARACTERISTIC



FM MUITIPLEX ALIGNMENT PROCEDURE

1. Do not attempt to align the Multiplex Circuit unless the following equipment is available:

a. Multiplex Stereo Generator b. Oscilloscope c. AC. V.T.V.M. d. Audio Oscillator e. FM Signal Generator

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	ADJUST	ADJUST FOR
1.	19 kHz Trap	19 kHz Audio Signal	Connect to 4A	V.T.V.M. at 4G	L_{401}	Minimum
2.	67 kHz Trap	67 kHz Audio Signal	Connect to 4A	V.T.V.M. at 4G	L_{403}	Minimum
3.	19 kHz Transformer	FM Signal Gen. Modulated 30% by STEREO Gen. sub-channel	Antenna terminals Tune to signal	V.T.V.M. and Oscilloscope at 4H	T_{401}	Maximum
4.	38 kHz Transformer	FM Signal Gen. Modulated 30% by STEREO Gen.	Antenna terminals Tune to signal	V.T.V.M. and Oscilloscope at 4H	T_{402}	Maximum
5.	38 kHz Transformer and Separation VR	FM Signal Gen. Modulated 30% by STEREO Signal Gen. channel-L	Antenna terminals Tune to signal	V.T.V.M. and Oscilloscope at output load channel-R	T_{402} within ¼ turn and Separation VR (VR_{601})	Channel-R Minimum

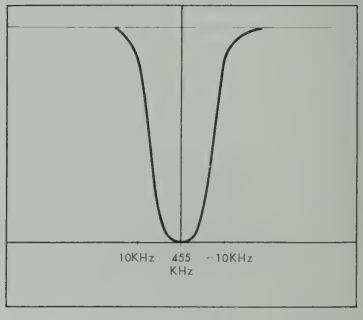
ALIGNMENT

AM ALIGNMENT PROCEDURE

NOTE: To aligh, set AM Signal Generator level to minimum.

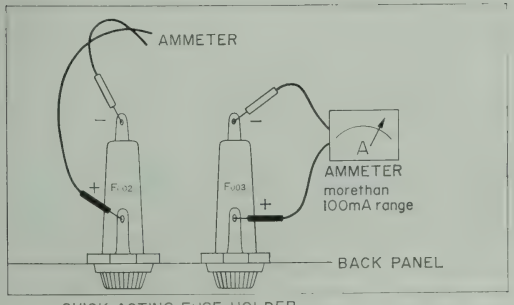
STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	DIAL SETTING	ADJUST	ADJUST FOR
1.	I.F. Trasformer	455 kHz ±30 kHz Sweep-generator	Antenna terminals	Oscilloscope and V.T.V.M. is connected to TP_{301}		Primary and secondary sides from the lst I.F.T.(T_{302}~T_{304})	Best I.F.T. wave form
2.	O.S.C.	AM-generator 600 kHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	600 kHz	O.S.C. Coil T_{301}	Maximum
3.	O.S.C.	AM-generator 1400 kHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	1400kHz	O.S.C. Trimmer cap. TC_{302}	Maximum
4.	Repeat 2 and 3						
5.	Antenna circuit	AM-generator 600 kHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	600 kHz	Ferrite bar Antenna coil T_{002}	Maximum
6.	Antenna circuit	AM-generator 1400 kHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	1400kHz	Antenna circuit Trimmer TC_{301}	Maximum
7.	Repeat 5 and 6						

AM IF CHARACTERISTIC



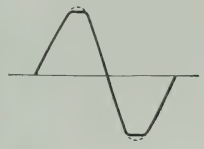
1. CURRENT ADJUSTMENT

STEP	SETTING OF AMMETER (TESTER)	WAHT TO DO	NOTE
1.		Remove F_{002} and F_{003}.	Use an ammeter having 100 or 50mA range.
2.		Set VR_{802} and VR_{804} to minimum.	
3.		Set VR_{703} and VR_{704} (VOLUME) to minimum.	
4.		Push the POWER switch ON.	Be sure to switch on lst and then connect the ammeter.
5.	100mA range.	Connect the ammeter to F_{002} as illustrated in Fig. 1.	
6.		Turn VR_{802} clockwise and adjust current to 15mA.	
7.	100mA range.	Push the POWER switch OFF and attach F_{002} in place.	
8.		Push the POWER switch ON and connect the ammeter to F_{003} as illustrated in Fig. 1.	
9.		Turn VR_{804} clockwise and adjust current to 15	
10.		Attach F_{003} in place.	

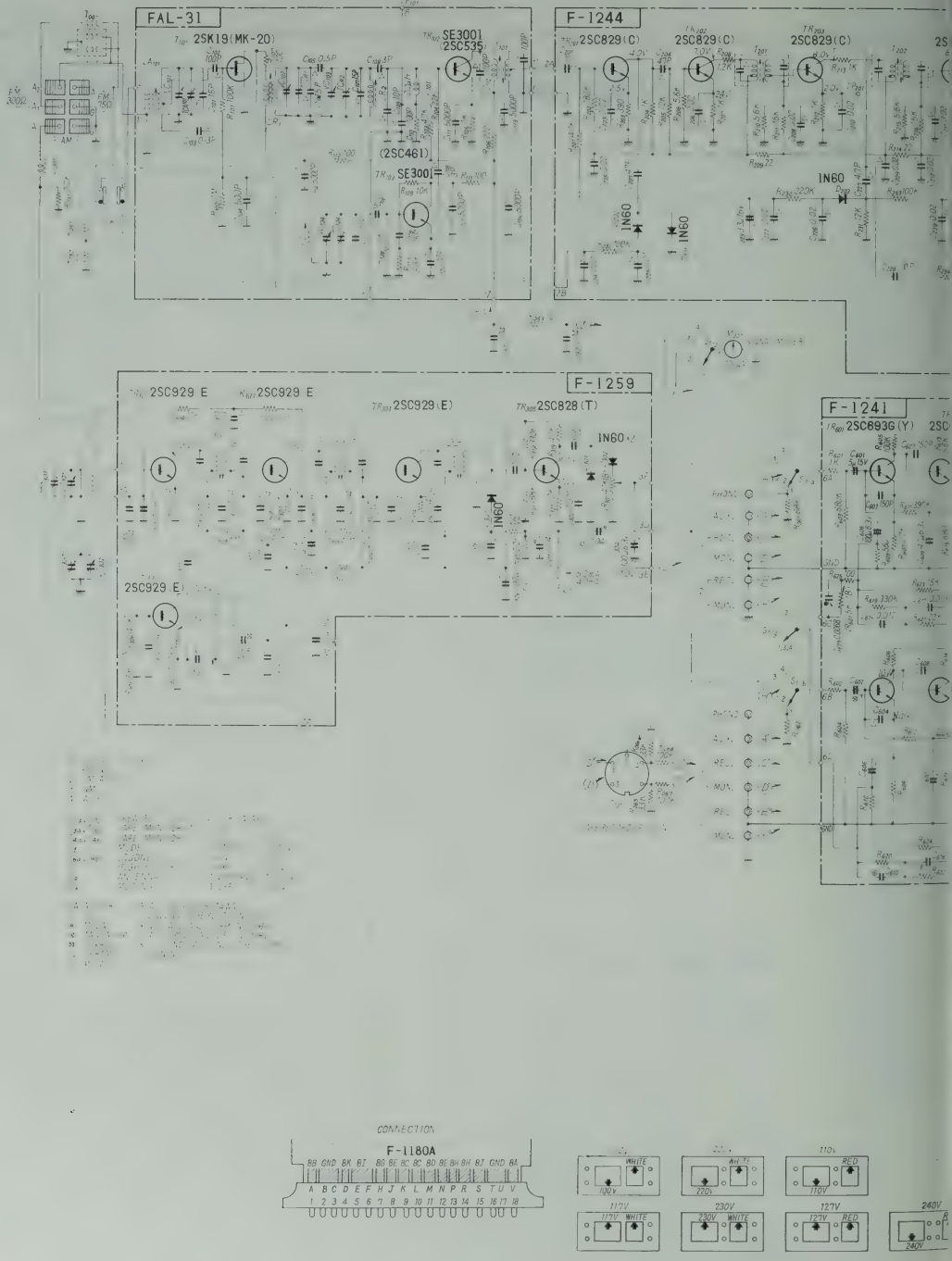


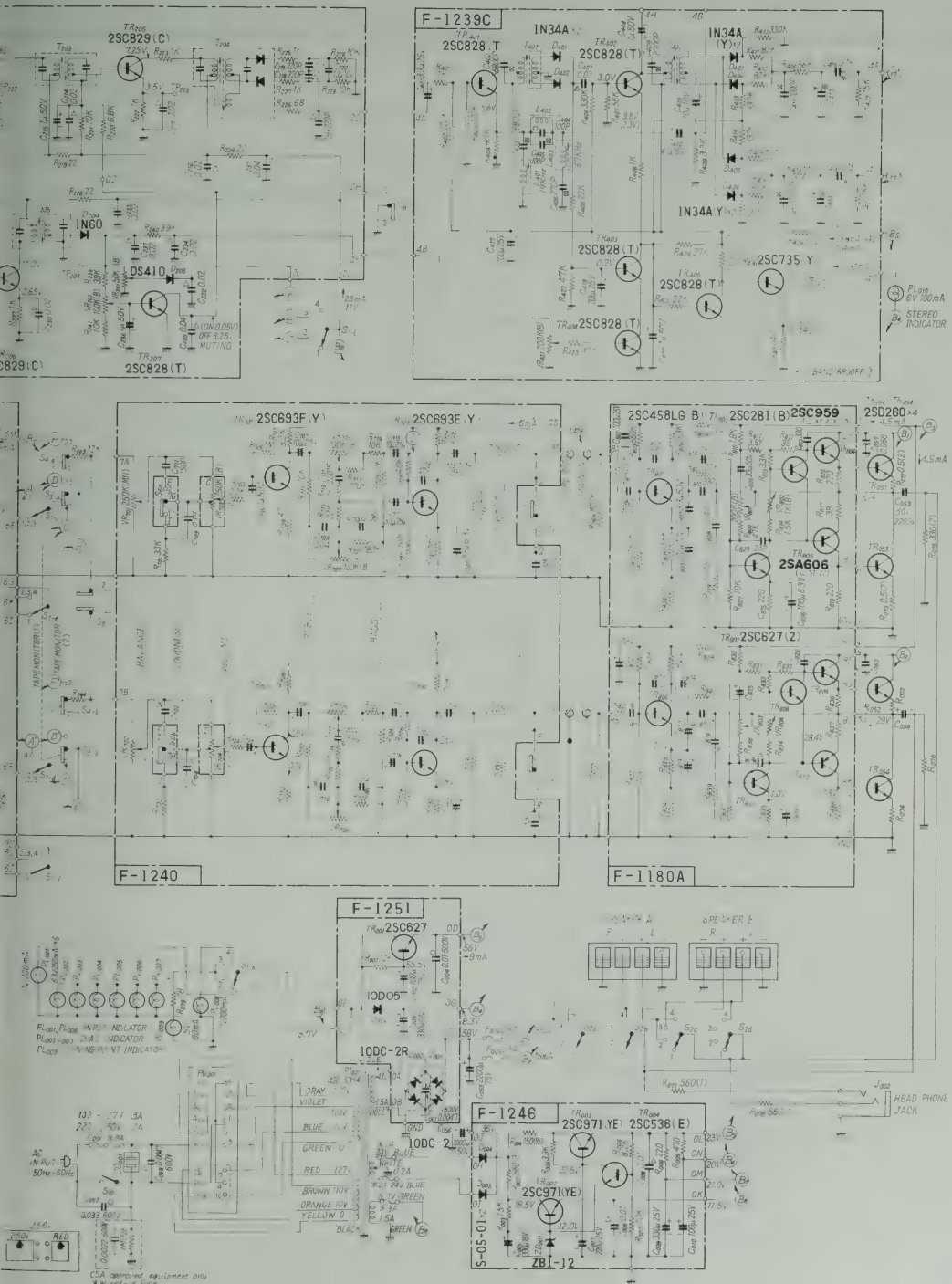
QUICK ACTING FUSE HOLDER

2. OUTPUT ADJUSTMENT

STEP	WHAT TO DO	NOTE
1.	Adjust the volume control to minimum.	
2.	Set an oscillator to 1,000Hz and connect it to the LEFT AUX input.	The oscillator used should have the oscillation frequency of 20 to 20,000Hz and the output voltage of more than 200mV.
3.	Set the SELECTOR switch to AUX.	Set other controls and switches as follows: BALANCE to CENTER TAPE MON. to OFF MODE to STEREO TONE to CENTER Others to OFF
4.	Connect an 8– or 16-ohm load resistor having capacitor of more than 50 watts to the LEFT SPEAKER output.	
5.	Connect an osscilloscope to the SPEAKER terminal.	
6.	Push the POWER switch on and advance the volume little by little. Check the output at the terminal by means of the oscilloscope.	
7.	Adjust VR_{801} so that the fronts of sine wave are clipped simultaneously	
8.	Adjust the right channel as above. In Step 7, adjust VR_{803}.	

SCHEMATIC DIAGRAM



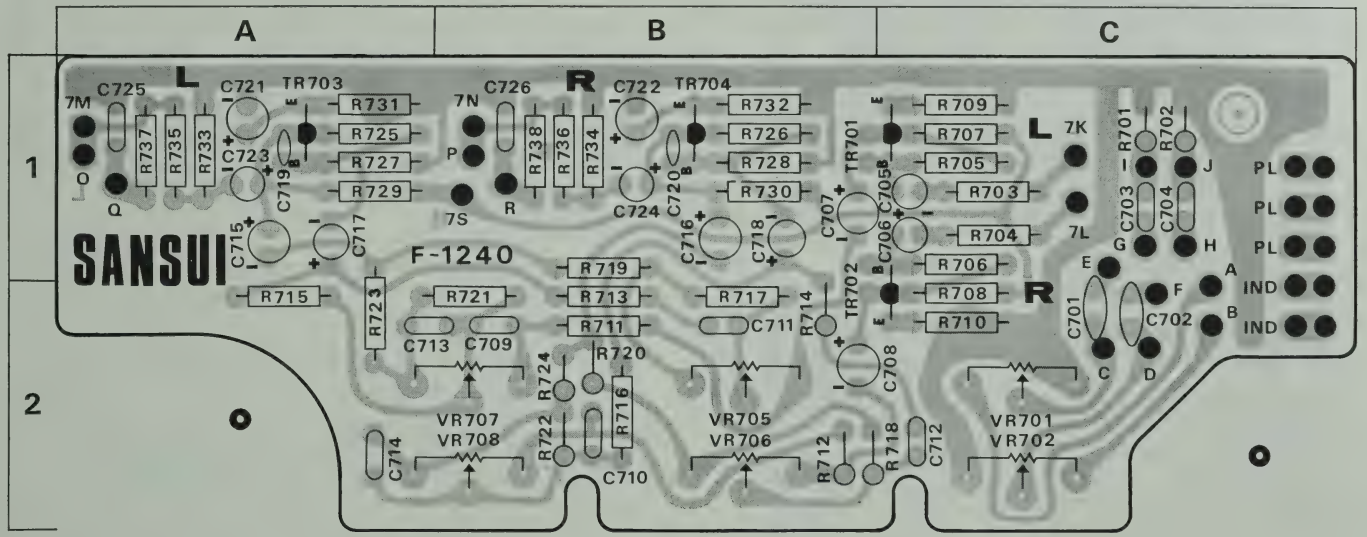

F-1239C
F-1240
F-1180A
F-1251
F-1246
2SC829(C)
2SC828(T)
2SC828 T
2SC828(T)
IN34A
IN34A (Y)
IN34A Y
IN60
DS410
2SC828(T)
2SC735 Y
2SC828(T)
2SC828(T)
2SC828(T)
2SC828(T)
PL910 6V 100mA
STEREO INDICATOR
2SC693F(Y)
2SC693E(Y)
2SC458LG B
2SC281(B)
2SC959
2SD260 ×4
2SA606
2SC627(2)
2SC627
10D05
10DC-2R
10DC-2
2SC971(YE)
2SC536(E)
2SC971(YE)
ZB1-12
S-05-01
HEAD PHONE JACK
AC INPUT 50Hz-60Hz
CSA approved equipment only
*Wired-in Fuse.

PRINTED CIRCUIT BOARDS AND PARTS LIST

X: Parts No **Y:** Parts Name **Z:** Position of Parts

TONE CONTROL BLOCK 〈F-1240〉

X	Y	Z
R701	33kΩ	1C
R702	33kΩ	1C
R703	2.2kΩ	1C
R704	2.2kΩ	1C
R705	1MΩ	1C
R706	1MΩ	1C
R707	8.2kΩ	1C
R708	8.2kΩ	2C
R709	470Ω	1C
R710	470Ω	2C
R711	10kΩ	2B
R712	10kΩ	2B
R713	1kΩ	2B
R714	1kΩ	2B
R715	22kΩ	2A
R716	22kΩ	2B
R717	270kΩ	2B
R718	270kΩ	2B, C
R719	10kΩ ±10% ¼W Carbon Resistor	1B
R720	10kΩ	2B
R721	180kΩ	2A, B
R722	180kΩ	2B
R723	10kΩ	1, 2A
R724	10kΩ	2B
R725	470kΩ	1A
R726	470kΩ	1B
R727	150kΩ	1A
R728	150kΩ	1B
R729	5.6kΩ	1A
R730	5.6kΩ	1B
R731	560Ω	1A
R732	560Ω	1B
R733	82kΩ	1A
R734	82kΩ	1B
R735	2.2kΩ	1A
R736	2.2kΩ	1B
R737	820kΩ	1A
R738	820kΩ	1B
VR701,702	250kΩ(MN) Balance Control (101040)	2C
VR705,706	100kΩ(B)×2 Treble Control (102004)	2B
VR707,708	100kΩ(B)×2 Bass Control (102004)	2A, B
C701	150 pF ±10% 50 WV Ceramic Capacitor	2C
C702	150 pF	2C
C703	0.01μF ±10% 50 WV Mylar Capacitor	1C
C704	0.01μF	1C
C705	1μF 50 WV Electrolytic Capacitor	1C
C706	1μF	1C
C707	10μF 25 WV Electrolytic Capacitor	1B
C708	10μF	2B
C709	0.04μF	2B
C710	0.04μF	2B
C711	0.0015μF ±10% 50 WV Mylar Capacitor	2B
C712	0.0015μF	2C
C713	0.06μF	2A, B
C714	0.06μF	2A
C715	10μF 25 WV Electrolytic Capacitor	1A
C716	10μF	1B
C717	3.3μF	1A
C718	3.3μF	1B
C719	47 pF ±10% 50 WV Ceramic Capacitor	1A
C720	47 pF	1B
C721	33μF 6.3 WV Electrolytic Capacitor	1A
C722	33μF	1B
C723	3.3μF 25 WV Electrolytic Capacitor	1A
C724	3.3μF	1B
C725	0.02μF ±10% 50 WV Mylar Capacitor	1A
C726	0.02μF	1B
TR701	2SC693F(Y) (030575-1)	1B
TR702	2SC693F(Y)	1, 2C
TR703	2SC693E(Y) (030575)	1A
TR704	2SC693E(Y)	1B


A
B
C
1
2
L
R
SANSUI
F-1240
7M
7N
7S
7K
7L
P
Q
R
C725
C721
C723
C719
TR703
C726
C722
C724
C720
TR704
C715
C717
C716
C718
C707
C706
C705
TR701
C703
C704
R701
R702
C701
C702
TR702
C708
C709
C711
C713
C714
C710
C712
R731
R725
R727
R729
R732
R726
R728
R730
R737
R735
R733
R738
R736
R734
R709
R707
R705
R703
R704
R706
R708
R710
R715
R723
R721
R719
R713
R711
R717
R714
R724
R722
R720
R716
R712
R718
VR707
VR708
VR705
VR706
VR701
VR702
PL
PL
PL
IND
IND
A
B
C
D
E
F
G
H
J

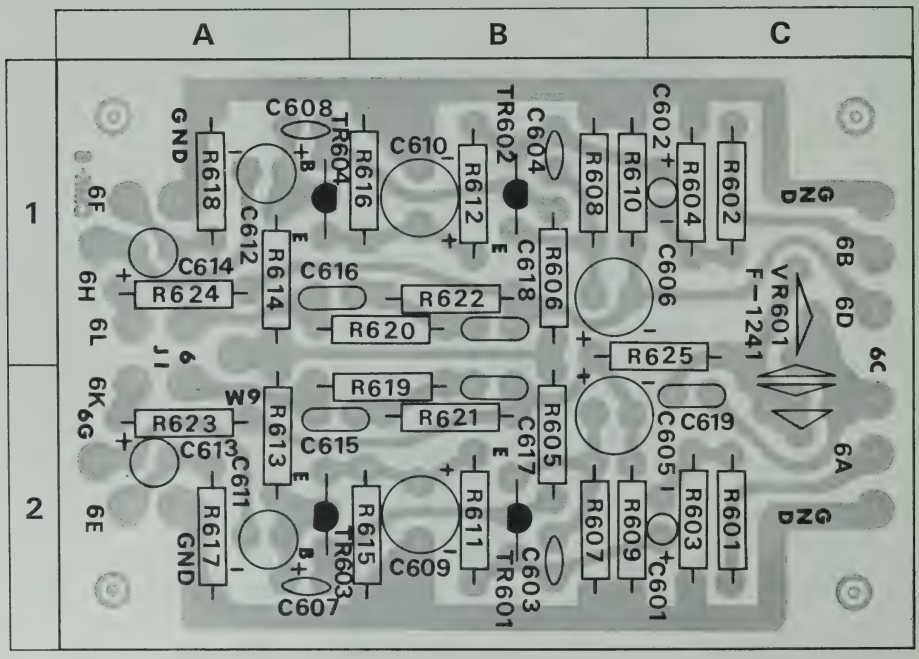
PRINTED CIRCUIT BOARDS AND PARTS LIST

X: Parts No **Y:** Parts Name **Z:** Position of Parts

EQUALIZER AMP BLOCK ⟨F-1241⟩

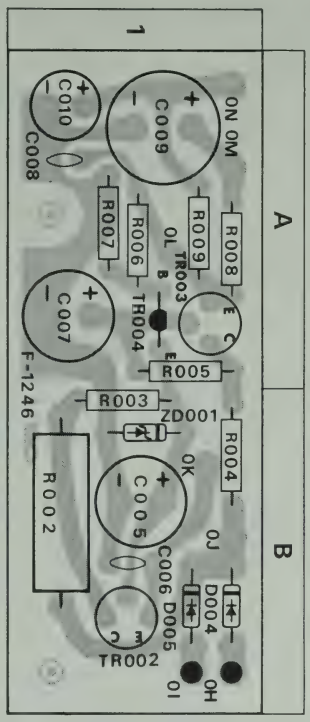
X	Y	Z
R601	1kΩ }	2C
R602	1kΩ }	1C
R603	680kΩ }	2C
R604	680kΩ }	1C
R605	100kΩ }	2B
R606	100kΩ }	1B
R607	2.2kΩ }	2B
R608	2.2kΩ }	1B
R609	560Ω }	2B
R610	560Ω }	1B
R611	390kΩ }	2B
R612	390kΩ }	1B
R613	5.6kΩ } ±10% ¼W Carbon Resistor	2A
R614	5.6kΩ }	1A
R615	680Ω }	2B
R616	680Ω }	1B
R617	82kΩ }	2A
R618	82kΩ }	1A
R619	330kΩ }	2A, B
R620	330kΩ }	1A, B
R621	22kΩ }	2B
R622	22kΩ }	1B
R623	15kΩ }	2A
R624	15kΩ }	1A
R625	100Ω }	1B, C

X	Y	Z
VR601	5kΩ(B) (103037)	1C
C601	1.5μF } 15 WV Tantalume	2C
C602	1.5μF } Capacitor	1C
C603	150pF } ±10% 50 WV Ceramic	2B
C604	150pF } Capacitor	1B
C605	100μF } 6.3 WV Electrolytic	2B, C
C606	100μF } Capacitor	1B, C
C607	150pF } ±10% 50 WV Ceramic	2A
C608	150pF } Capacitor	1A
C609	47μF } 6.3 WV Electrolytic	2B
C610	47μF } Capacitor	1B
C611	10μF } 25 WV Alum. Electrolytic	2A
C612	10μF } Capacitor	1A
C613	0.33μF } 25 WV Electrolytic	2A
C614	0.33μF } Capacitor	1A
C615	0.012μF }	2A, B
C616	0.012μF }	1A, B
C617	0.0033μF } ±10% 50 WV Mylar	2B
C618	0.0033μF } Capacitor	1B
C619	0.0068μF }	2C
TR601	2SC693G(Y) } (030575-2)	2B
TR602	2SC693G(Y) }	1B
TR603	2SC693F(Y) } (030575-1)	2A
TR604	2SC693F(Y) }	1A



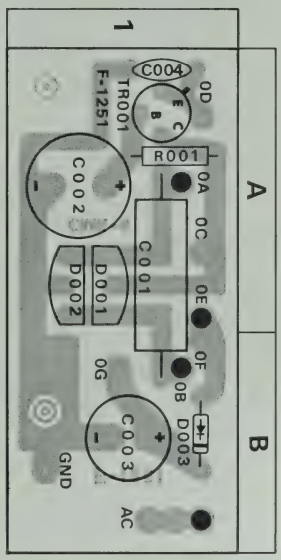
LIPPLE FILTER BLOCK ⟨F-1246⟩

X	Y	Z
R002	560Ω ±10% 3W Cement Resistor	1 B
R003	1.5kΩ ±10% ¼W Carbon Resistor	1 B
R004	150Ω ±10% ½W Solid Resistor	1 B
R005	3.9kΩ	1 A
R006	8.2kΩ	1 A
R007	10kΩ ±10% ¼W Carbon Resistor	1 A
R008	220Ω	1 A
R009	470Ω	1 A
C005	330μF 16 WV Eletrolytic Capacitor	1 B
C006	0.01μF $^{+100}_{-0}$% 50 WV Ceramic Capacitor	1 B
C007	220μF 25 WV Electrolytic Capacitor	1 A
C008	0.01μF $^{+100}_{-0}$% 50 WV Ceramic Capacitor	1 A
C009	330μF 25 WV Electrolytic Capacitor	1 A
C010	100μF	1 A
TR002	2SC971(Y) (030553, -1)	1 B
TR003	2SC971(Y) (030553, -1)	1 A
TR004	2SC536(E) (030515-4)	1 A
D004	S-05-01 or 10D-1 (031077) (031034)	1 B
D005	S-05-01 or 10D-1 (031077) (031034)	1 B
ZD001	ZB1-12 (031064-1)	1 B



POWER BLOCK ⟨F-1251⟩

X	Y	Z
R001	12kΩ ±10% ¼W Carbon Resistor	1 A
C001	0.0047μF ±10% 600WV Oil Capacitor	1 A, B
C002	100μF 75 WV Electrolytic Capacitor	1 A
C003	330μF 10 WV Electrolytic Capacitor	1 B
C004	0.01μF 500WV Ceramic Capacitor	1 A
TR001	2SC627 (1~3) (030558, -1, -2)	1 A
D001	10DC-2 (031080)	1 A
D002	10DC-2R (031080-1)	1 A
D003	10D05 (0310880)	1 B



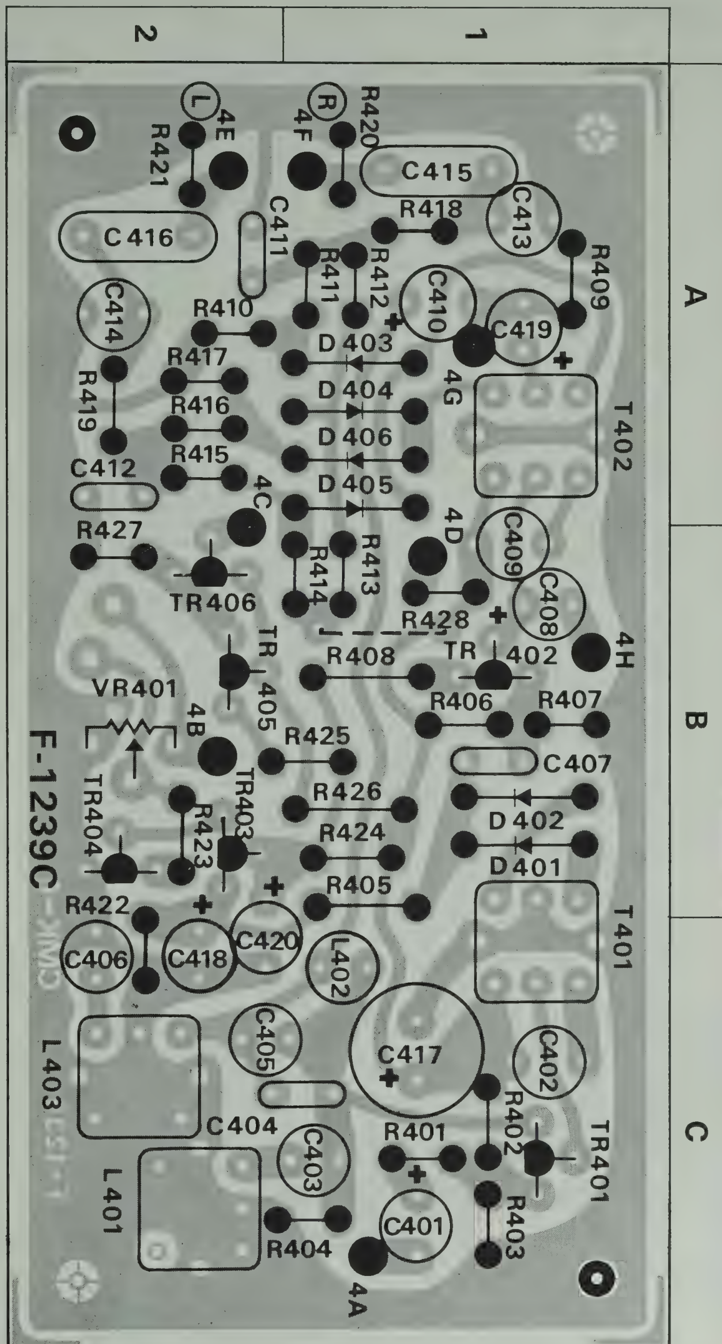
PRINTED CIRCUIT BOARDS AND PARTS LIST

X: Parts No **Y:** Parts Name **Z:** Position of Parts

MULTIPLEX BLOCK 〈F-1239C〉

X	Y	Z
R401	1kΩ	1 C
R402	220kΩ	1 C
R403	100kΩ	1 C
R404	4.7kΩ	1, 2 C
R405	22kΩ	1 B
R406	330kΩ	1 B
R407	56kΩ	1 B
R408	1kΩ	1 B
R409	3.3kΩ ±10% ¼W Carbon Resistor	1 A
R410	330kΩ	2 A
R411	8.2kΩ	1 A
R412	8.2kΩ	1 A
R413	330kΩ	1 B
R414	330kΩ	1 B
R415	8.2kΩ	2 A
R416	8.2kΩ	2 A
R417	330kΩ	2 A
R418	56kΩ	1 A
R419	56kΩ	2 A
R420	15kΩ ± 5% ¼W Carbon Reistor	1 A
R421	15kΩ	2 A
R422	47kΩ	2 B, C
R423	47kΩ	2 B
R424	27kΩ	1 B
R425	22kΩ ±10% ¼W Carbon Resistor	1, 2 B
R426	2.7kΩ	1 B
R427	4.7Ω	2 B
R428	220Ω	1 B
VR401	200kΩ(B) Stereo Indicator Adj. (103035)	2 B
C401	3.3μF 25 WV Electrolytic Capacitor	1 C
C402	6800pF ± 5% 50 WV Styrol Capacitor	1 C
C403	6800pF	1 C
C404	100pF ± 5% 50 WV Mica Capacitor	1, 2 C
C405	1000pF ± 5% 50 WV Styrol Capacitor	1, 2 C
C406	270pF	2 C
C407	0.02μF +100 −0% 50 WV Ceramic Capacitor	1 B
C408	1μF 50 WV Electrolytic Capacitor	1 B
C409	2700pF ± 5% 50 WV Styrol Capacitor	1 A, B
C410	47μF 16 WV Electrolytic Capacitor	1 A
C411	1000pF	2 A
C412	1000pF ± 5% 50 WV Styrol Capacitor	2 A
C413	6800pF	1 A
C414	6800pF	2 A
C415	0.15μF ±10% 50 WV Mylar Capacitor	1 A
C416	0.15μF	2 A
C417	100μF 25 WV Electrolytic Capacitor	1 C
C418	3.3μF	2 C
C419	10μF 10 WV Electrolytic Capacitor	1 A
C420	1μF 50 WV	1 C, 2 B C
TR401	2SC828(T)	1 C
TR402	2SC828(T)	1 B
TR403	2SC828(T) (030527)	2 B
TR404	2SC828(T)	2 B
TR405	2SC828(T)	2 B
TR406	2SC735 (O or Y) (030564, -1)	2 B

X	Y		Z
D401	IN34A	(031040)	1 B
D402	IN34A		1 B
D403	IN34A (Y)		1 A
D404	IN34A (Y)		1 A
D405	IN34A (Y)	(031040-1)	1 A
D406	IN34A (Y)		1 A
T401	19kHz Tuning Trap	(424043)	1 B, C
T402	38kHz Tuning Trap	(424044)	1 A
L401	19kHz Filter	(424045)	2 C
L402	Inductor	(490003-1)	1 C
L403	67kHz Filter	(424046)	2 C



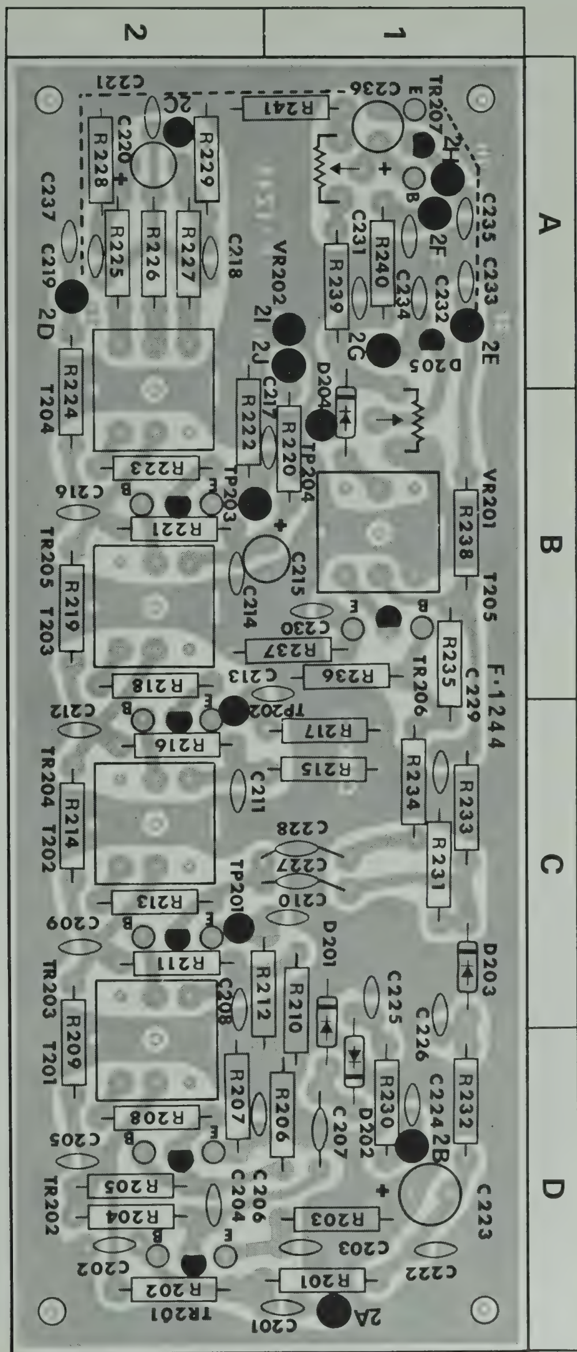
1
2
A
B
C
F-1239C
L
R
4E
4F
4G
4C
4D
4H
4B
4A
R420
R421
C415
C416
C411
R418
C413
R409
R411
R412
C410
C419
C414
R410
D403
R417
R419
D404
R416
D406
T402
R415
C412
D405
R427
C409
R414
R413
C408
TR406
R428
TR405
R408
TR402
VR401
R406
R407
R425
C407
TR404
TR403
R423
R426
D402
R424
D401
R405
R422
C406
C418
C420
L402
T401
C405
C417
C402
L403
R402
C404
R401
TR401
C403
L401
R403
R404
C401

PRINTED CIRCUIT BOARDS AND PARTS LIST

X: Parts No **Y:** Parts Name **Z:** Position of Parts

FM IF BLOCK 〈F-1244〉

X	Y	Z
R201	4.7kΩ	1, 2 D
R202	180kΩ	2 D
R203	390Ω	1 D
R204	1kΩ	2 D
R205	12kΩ	2 D
R206	5.6kΩ	1 D
R207	1kΩ	2 D
R208	1.2kΩ	2 D
R209	22Ω	2 C, D
R210	5.6kΩ	1 C, D
R211	15kΩ	2 C
R212	1kΩ	2 C, D
R213	1kΩ	2 C
R214	22Ω	2 C
R215	5.6kΩ	1 C
R216	15kΩ	2 C
R217	1kΩ	1 C
R218	680Ω	2 B
R219	22Ω	2 B
R220	6.8kΩ	1 A, B
R221	10kΩ ±10% ¼W Carbon Resistor	2 B
R222	1kΩ	2 A, B
R223	1kΩ	2 B
R224	22Ω	2 A, 2 B
R225	1kΩ	2 A
R226	68Ω	2 A
R227	1kΩ	2 A
R228	10kΩ	2 A
R229	10kΩ	2 A
R230	100kΩ	1 D
R231	12kΩ	1 C
R232	220kΩ	1 D
R233	100kΩ	1 C
R234	10Ω	1 C
R235	22kΩ	1 B, C
R236	10kΩ	1 B
R237	1kΩ	1, 2 B
R238	22Ω	1 B
R239	3.9kΩ	1 A
R240	3.9kΩ	1 A
R241	10kΩ	1, 2 A
VR201	50kΩ(B) Tuning Meter Adjustor (103020)	1 B
VR202	100kΩ(B) Muting Adjustor (103034)	1 A
C201	1000 pF +80 −20% 25 WV Ceramic Capacitor	1, 2 D
C203	0.02μF +80 −20% 25 WV Ceramic Capacitor	1 D
C204	47 pF ±10% 50 WV Ceramic Capacitor	2 D
C205	0.02μF +80 −20% 25 WV Ceramic Capacitor	2 D
C206	0.02μF +80 −20% 25 WV Ceramic Capacitor	2 D
C207	47 pF ±10% 50 WV Ceramic Capacitor	1 D
C208	0.02μF +80 −20% 25 WV Ceramic Capacitor	2 C
C209	0.02μF +80 −20% 25 WV Ceramic Capacitor	2 C
C210	0.02μF +80 −20% 25 WV Ceramic Capacitor	1 C
C211	0.02μF +80 −20% 25 WV Ceramic Capacitor	2 C
C212	0.02μF +80 −20% 25 WV Ceramic Capacitor	2 C
C213	0.02μF +80 −20% 25 WV Ceramic Capacitor	1, 2 B
C214	0.02μF +80 −20% 25 WV Ceramic Capacitor	2 B
C215	1μF 50 WV Electrolytic Capacitor	1, 2 B
C216	0.02μF +80 −20% 25 WV Ceramic Capacitor	2 B
C217	0.02μF +80 −20% 25 WV Ceramic Capacitor	1, 2 B
C218	220 pF ±10% 50 WV Ceramic Capacitor	2 A
C219	220 pF ±10% 50 WV Ceramic Capacitor	2 A
C220	10μF 10 WV Electrolytic Capacitor	2 A
C221	220 pF ±10% 50 WV Ceramic Capacitor	2 A
C222	0.02μF +80 −20% 25 WV Ceramic Capacitor	1 D
C223	3.3μF 16 WV Electrolytic Capacitor	1 D
C224	0.01μF +80 −20% 25 WV Ceramic Capacitor	1 D
C225	0.01μF +80 −20% 25 WV Ceramic Capacitor	1 C
C226	0.02μF +80 −20% 25 WV Ceramic Capacitor	1 C, D
C227	4.7 pF ±10% 50 WV Ceramic Capacitor	1 C
C228	10 pF ±10% 50 WV Ceramic Capacitor	1 C
C229	0.02μF +80 −20% 25 WV Ceramic Capacitor	1 C
C230	0.02μF +80 −20% 25 WV Ceramic Capacitor	1 B
C231	0.02μF +80 −20% 25 WV Ceramic Capacitor	1 A
C232	0.02μF +80 −20% 25 WV Ceramic Capacitor	1 A
C233	0.02μF +80 −20% 25 WV Ceramic Capacitor	1 A
C234	0.02μF +80 −20% 25 WV Ceramic Capacitor	1 A
C235	0.04μF +80 −20% 25 WV Ceramic Capacitor	1 A
C236	1μF 50 WV Electrolytic Capacitor	1 A
C237	0.04μF +80 −20% 25 WV Ceramic Capacitor	2 A
TR201	2SC829(C)	2 D
TR202	2SC829(C)	2 D
TR203	2SC829(C)	2 C
TR204	2SC829(C) (030546-1)	2 C
TR205	2SC829(C)	2 B
TR206	2SC829(C)	1 B
TR207	2SC828(T) (030527)	1 A
D201	IN60	1 C, D
D202	IN60	1 C, D
D203	IN60 (031033, -1)	1 C
D204	IN60	1 A, B
D205	DS410 (034003)	1 A
T201	FM IFT 10.7MHz (423543)	2 C, D
T202	FM IFT 10.7MHz (423543)	2 C
T203	FM IFT 10.7MHz (423542)	2 B
T204	FM Detector 10.7MHz (423518)	2 A, B
T205	FM Meter Transformer (423529)	1 B



A
B
C
D
1
2
F-1244
TR201
TR202
TR203
TR204
TR205
TR206
TR207
T201
T202
T203
T204
T205
VR201
VR202
TP201
TP202
TP203
TP204
D201
D202
D203
D204
D205
2A
2B
2C
2D
2E
2F
2G
2I
2J
R201
R202
R203
R204
R205
R206
R207
R208
R209
R210
R211
R212
R213
R214
R215
R216
R217
R218
R219
R220
R221
R222
R223
R224
R225
R226
R227
R228
R229
R230
R231
R232
R233
R234
R235
R236
R237
R238
R239
R240
R241
C201
C202
C203
C204
C205
C206
C207
C208
C209
C210
C211
C212
C213
C214
C215
C216
C217
C218
C219
C220
C221
C222
C223
C224
C225
C226
C227
C228
C229
C230
C231
C232
C233
C234
C235
C236
C237

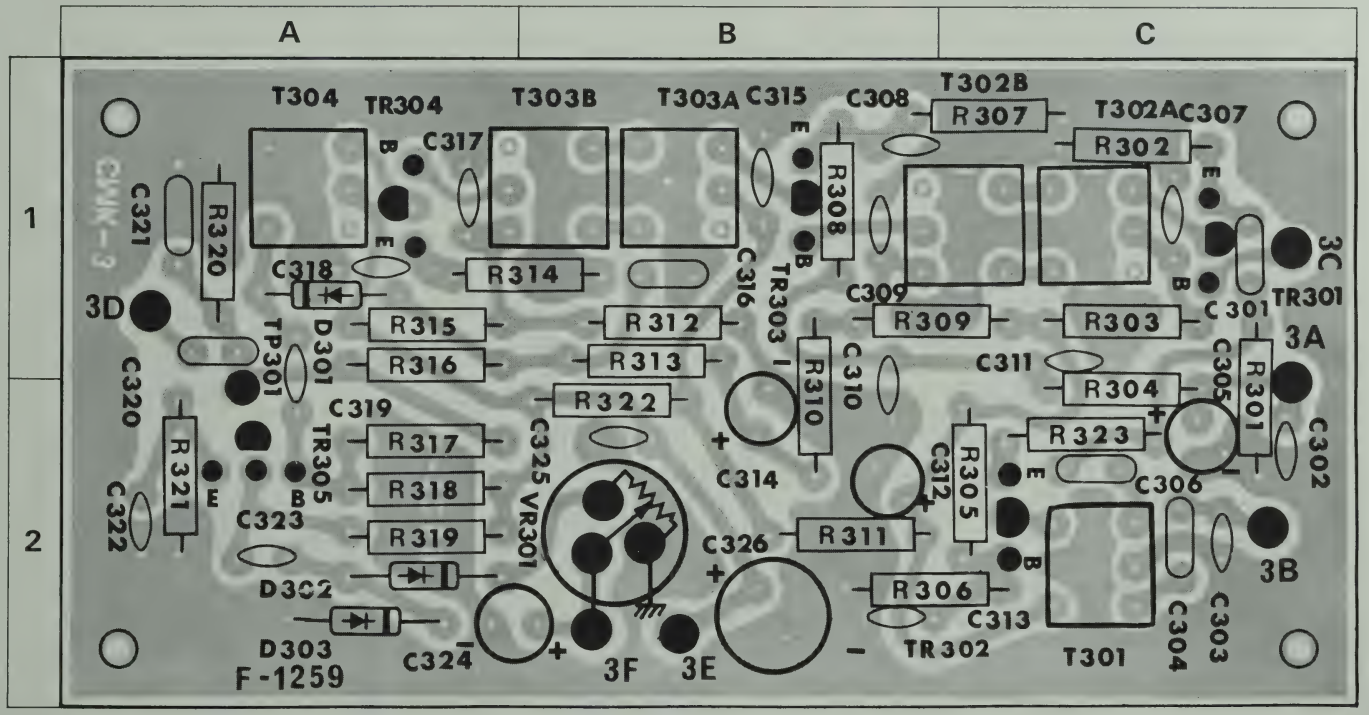
PRINTED CIRCUIT BOARDS AND PARTS LIST

X: Parts No **Y:** Parts Name **Z:** Position of Parts

AM IF BLOCK 〈F-1259〉

X	Y	Z
R301	1kΩ	1, 2 C
R302	1kΩ	1 C
R303	560Ω	1 C
R304	12kΩ	2 C
R305	39kΩ	2 C
R306	4.7kΩ	2 B, C
R307	1kΩ	1 B, C
R308	4.7kΩ	1 B
R309	39kΩ	1 B, C
R310	4.7kΩ	1, 2 B
R311	120Ω	2 B
R312	22kΩ ±10% ¼W Carbon Resistor	1 B
R313	3.9kΩ	1 B
R314	1kΩ	1 A, B
R315	82kΩ	1 A
R316	33kΩ	1 A
R317	68kΩ	2 A
R318	330kΩ	2 A
R319	4.7kΩ	2 A
R320	2.2kΩ	1 A
R321	1.2kΩ	2 A
R322	120Ω	2 B
R323	22Ω	2 C
VR301	47kΩ(B) (103517)	2 B
C301	0.01μF ±10% 50 WV Mylar Capacitor	1 C
C302	0.04μF +80 −20% 25 WV Ceramic Capacitor	2 C
C303	10pF ±10% 50 WV Ceramic Capacitor	2 C
C304	430pF ± 5% 125WV Styrol Capacitor	2 C
C305	3.3μF 16 WV Electrolytic Capacitor	2 C
C306	0.01μF ±10% 50 WV Mylar Capacitor	2 C
C307	0.04μF	1 C
C308	0.04μF	1 B
C309	0.04μF +80 −20% 25 WV Ceramic Capacitor	1 B
C310	0.04μF	1, 2 B
C311	0.04μF	1 C
C312	10μF 16 WV Electrolytic Capacitor	2 B
C313	0.04μF +80 −20% 25 WV Ceramic Capacitor	2 B
C314	10μF 16 WV Electrolytic Capacitor	1, 2 B
C315	0.04μF +80 −20% 25 WV Ceramic Capacitor	1 B
C316	0.01μF ±10% 50 WV Mylar Capaitor	1 B
C317	0.04μF	1 A
C318	0.04μF +80 −20% 25 WV Ceramic Capacitor	1 A, 1 B
C319	0.001μF	1, 2 A
C320	0.04μF	1 A
C321	0.04μF ±10% 50 WV Mylar Capacitor	1 A
C322	0.001μF	2 A
C323	0.01μF +80 −20% 25 WV Ceramic Capacitor	2 A
C324	100μF 6.3V Electrolytic Capacitor	2 A, B
C325	0.04μF +80 −20% 25 WV Ceramic Capacitor	2 B
C326	100μF 16 WV Electrolytic Capacitor	2 B

X	Y		Z
TR301	2SC929 (C~E)	(030572-1~3)	1 C
TR302	2SC929 (D)	(030572-2)	2 C
TR303	2SC929 (C~E)	(030572-1~3)	1 B
TR304	2SC929 (C~E)	(030572-1~3)	1 A
TR305	2SC828 (T)	(030527)	2 A
D301	IN60		1, 2 A
D302	IN60	(031033, -1)	2 A
D303	IN60		2 A
T301	AM OSC	(422023)	2 C
T302(A)	AM IFT 455kHz	(423030)	1 C
T302(B)		(423031)	1 B, C
T303(A)	AM IFT 455kHz	(423030)	1 B
T303(B)		(423031)	1 A, B
T304	AM IFT 455kHz	(423041)	1 A


A
B
C
1
2
T304
TR304
T303B
T303A
C315
C308
T302B
R307
T302A
C307
R302
C317
C321
R320
C318
R314
C316
TR303
R308
C309
R309
R303
C301
TR301
3C
3D
TP301
D301
R315
R312
R316
R313
R322
C319
C320
R317
C325
VR301
C314
R310
C310
C311
R304
R301
3A
C305
R321
TR305
R318
C323
C322
R319
C312
R305
R323
C306
C302
D302
R311
C326
3B
R306
C313
D303
F-1259
C324
3F
3E
TR302
T301
C304
C303

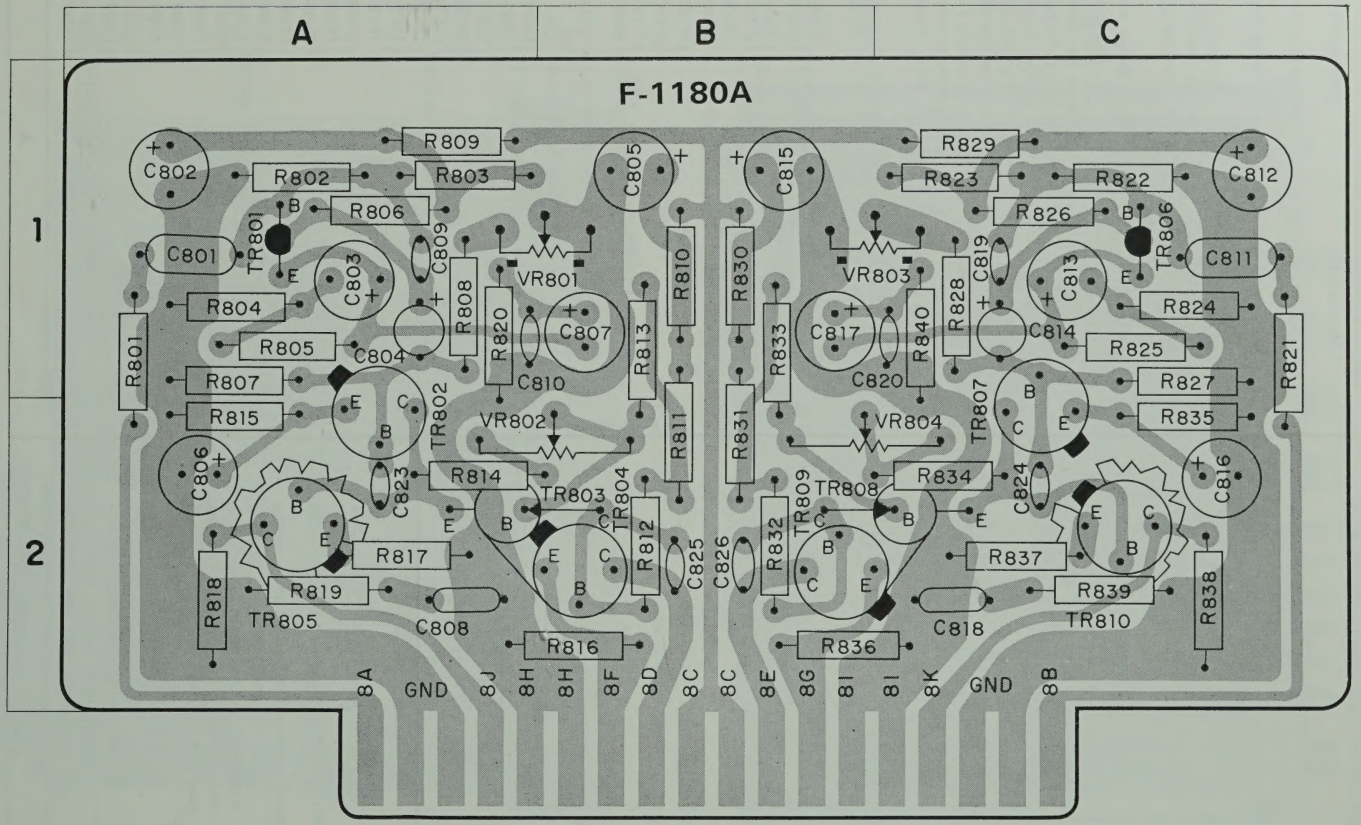
PRINTED CIRCUIT BOARDS AND PARTS LIST

X: Parts No **Y:** Parts Name **Z:** Position of Parts

DRIVER AMP BLOCK 〈F-1180A〉

X	Y	Z
R801	2.2kΩ }	1, 2 A
R802	150kΩ	1 A
R803	560kΩ	1 A
R804	1kΩ	1 A
R805	3.3kΩ	1 A
R806	3.3kΩ	1 A
R807	10kΩ	1 A
R808	47kΩ	1 A
R809	56kΩ	1 A
R810	1.8kΩ } ±10% ¼W Carbon Resistor	1 B
R811	3.9kΩ	1, 2 B
R812	39Ω	2 B
R813	3.3kΩ	1, 2 B
R814	1.5kΩ	2 A, B
R815	220Ω	2 A
R816	220Ω	2 A, B
R817	39Ω	2 A
R818	220Ω }	2 A
R819	10Ω ±10% ½W Solid Resistor	2 A
R820	22kΩ }	1 A
R821	2.2kΩ	1, 2 C
R822	150kΩ	1 C
R823	560kΩ	1 C
R824	1kΩ	1 C
R825	3.3kΩ	1 C
R826	3.3kΩ	1 C
R827	10kΩ	1 C
R828	47kΩ	1 C
R829	56kΩ } ±10% ¼W Carbon Resistor	1 C
R830	1.8kΩ	1 B
R831	3.9kΩ	1, 2 B
R832	39Ω	2 B
R833	3.3kΩ	1, 2 B
R834	1.5kΩ	2 C
R835	220Ω	2 C
R836	220Ω	2 B, C
R837	39Ω	2 C
R838	220Ω }	2 C
R839	10Ω ±10% ½W Solid Resistor	2 C
R840	22kΩ ±10% ¼W Carbon Resistor	1, 2 C
VR801	200kΩ(B) AC Balance Adjustor (103015)	1 A, B
VR802	1kΩ(B) DC Balance Adjustor (103069)	2 A, B
VR803	200kΩ(B) AC Balance Adjustor (103015)	1 B, C
VR804	1kΩ(B) DC Balance Adjustor (103069)	2 B, C
C801	0.22μF ±10% 50 WV Mylar Capacitor	1 A
C802	100μF 25 WV }	1 A
C803	220μF 10 WV	1 A
C804	10μF 25 WV } Electrolytic	1 A
C805	33μF 50 WV Capacitor	1 B
C806	100μF 6.3 WV	2 A
C807	3.3μF 50 WV }	1 B
C808	0.047μF ±10% 50 WV Mylar Capacitor	2 A
C809	33pF } ±10% 50 WV Ceramic	1 A
C810	33pF } Capacitor	1 A
C811	0.22μF ±10% 50 WV Mylar Capacitor	1 C

X	Y	Z
C812	100μF 25 WV }	1 C
C813	200μF 10 WV	1 C
C814	10μF 25 WV } Electrolytic	1 C
C815	33μF 50 WV Capacitor	1 B
C816	100μF 6.3 WV	2 C
C817	3.3μF 50 WV }	1 B
C818	0.047μF ±10% 50 WV Mylar Capacitor	2 C
C819	33pF }	1 C
C820	33pF	1 C
C823	33pF ±10% 50 WV Ceramic	2 A
C824	33pF Capacitor	2 C
C825	330pF	2 B
C826	330pF }	2 B
TR801	2SC458LG(B) (030531)	1 A
TR802	2SC627(2) (030558-1)	2 A
TR803	2SC281(B) (030512-1)	2 A, B
TR804	2SC959 (L, M, N) (0305741,2,3)	2 B
TR805	2SA606 (L, M, N) (0300211,2,3)	2 A
TR806	2SC458LG(B) (030531)	1 C
TR807	2SC627(2) (030558-1)	1, 2 C
TR808	2SC281(B) (030512-1)	2 B, C
TR809	2SC959 (L, M, N) (0305741,2,3)	2 B, C
TR810	2SA606 (L, M, N) (0300211,2,3)	2 C

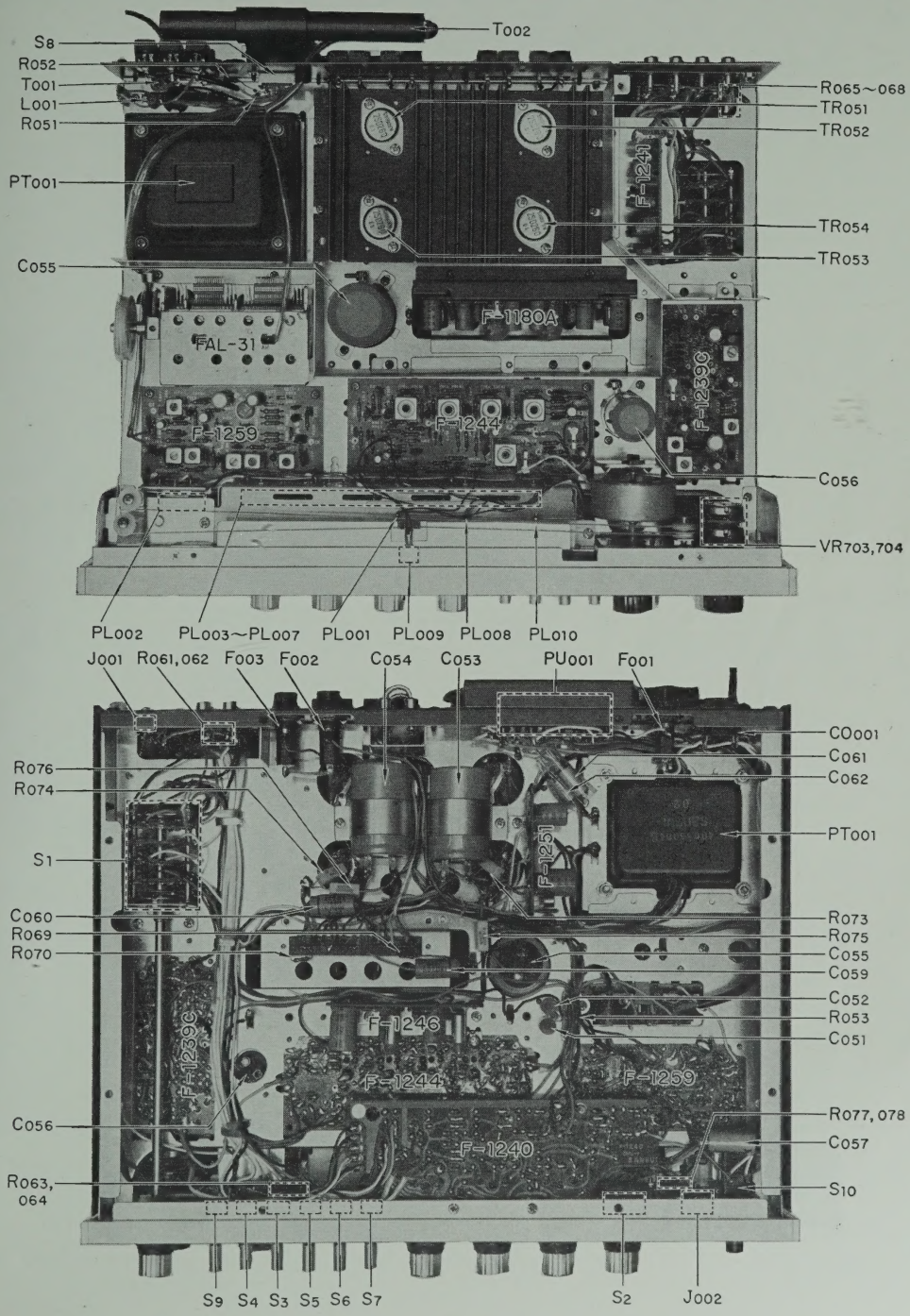

A
B
C
1
2
F-1180A
C802
R809
R802
R803
C805
C815
R829
R823
R822
C812
R806
R826
C801
TR801
C803
C809
VR801
VR803
TR806
C811
R804
R808
R820
C807
R813
R810
R830
R828
C819
C813
C817
R840
C814
R824
R801
R805
C804
C810
R833
R825
R821
R807
TR802
TR807
R827
R815
VR802
VR804
R835
C806
C823
R814
TR803
TR804
R811
R831
TR809
TR808
R834
C824
C816
R817
R812
C825
C826
R832
R837
R818
R819
TR805
C808
C818
TR810
R839
R838
R816
R836
8A
GND
8J
8H
8H
8F
8D
8C
8C
8E
8G
8I
8I
8K
GND
8B

OTHER PARTS AND THEIR POSITION ON CHASSIS

X: Parts No **Y:** Parts Name

X	Y
R031	2.2kΩ ±10% ¼W Carbon Resistor
R051	56Ω ±10% ¼W Carbon Resistor
R052	680Ω ±10% ¼W Carbon Resistor
R053	10Ω ±10% ¼W Carbon Resistor
R061	68kΩ ±10% ¼W Carbon Resistor
R062	68kΩ ±10% ¼W Carbon Resistor
R063	12kΩ ±10% ¼W Carbon Resistor
R064	12kΩ ±10% ¼W Carbon Resistor
R065	33kΩ ±10% ¼W Carbon Resistor
R066	33kΩ ±10% ¼W Carbon Resistor
R067	100kΩ ±10% ¼W Carbon Resistor
R068	100kΩ ±10% ¼W Carbon Resistor
R069	820kΩ ±10% ¼W Carbon Resistor
R070	820kΩ ±10% ¼W Carbon Resistor
R071	0.5Ω ±10% 2W Cement Resistor
R072	0.5Ω ±10% 2W Cement Resistor
R073	0.5Ω ±10% 2W Cement Resistor
R074	0.5Ω ±10% 2W Cement Resistor
R075	330Ω ±10% 2W Cement Resistor
R076	330Ω ±10% 2W Cement Resistor
R077	560Ω ±10% 1W Metal Film Resistor
R078	560Ω ±10% 1W Metal Film Resistor
R079	18Ω ±10% ¼W Carbon Resistor
VR703, 704	250kΩ(B)×2 Volume, Variable Resistor
C051	0.04μF +80% −20% 25W Ceramic Capacitor
C052	0.04μF +80% −20% 25W Ceramic Capacitor
C053	2200μF 50 WV Electrolytic Capacitor
C054	2200μF 50 WV Electrolytic Capacitor
C055	2200μF 75 WV Electrolytic Capacitor
C056	1000μF 50 WV Electrolytic Capacitor
C057	0.033μF ±10% 600WV Oil Capacitor
C058	0.0047μF ±10% 600WV Oil Capacitor
C059	0.068μF ±10% 400WV Oil Capacitor
C060	0.068μF ±10% 400WV Oil Capacitor
TR051~054	2SD260 or (030825-1) 2SC494 (R, Y, BL) (0305220,1,2)
S1	Selector Switch Y-4-10-4 (110415)
S2	Speaker Selector Switch Y-1-4-4 (110211)
S3	Tape Monitor (1) Switch (117017)
S4	Tape Monitor (2) Switch (117017)
S5	Mode Switch (117017)
S6	Loudness Switch (117017)
S7	High Filter Switch (117017)
S8	Antenna Att. Switch (111009)
S9	Muting Switch (117017)
S10	Power Switch (113016)
J001	DIN Connector (243004)
J002	Headphones Jack (243007-1)
J003	Multi Connector (242002)
M001	Tuning Meter (090020-1)
PT001	Power Transformer 400-5384 (400067)
PU001	Voltage Selector (241017~19)

X	Y	
F001	3A Fuse (100~127V)	(043004-2)
	2A Fuse (220~250V)	(043003-2)
F002,003	2.5A Quick Acting Fuse	(043001-1)
CO001	AC Outlet	(245001)
PL001	7V 200mA Phono Indicator Lamp	(040015-4)
PL002~007	6.3V 250mA Pilot Lamp F Type	(042002)
PL008	7V 200mA AUX Indicator Lamp	(040015-5)
PL009	5V 60mA Needle Indicator	(040010-1)
PL010	6V 100mA Stereo Indicator Lamp	(040016)
T001	75Ω : 300Ω High Frequency Transformer	(429002-1)
T002	220μH AM Bar Antenna	(420031)
L001	150μH Ferri Inductor	(490008)


S8
R052
T001
L001
R051
PT001
C055
T002
R065~068
TR051
TR052
TR054
TR053
C056
VR703,704
F-1241
F-1180A
FAL-31
F-1239C
F-1259
F-1244
PL002
PL003~PL007
PL001
PL009
PL008
PL010
J001
R061,062
F003
F002
C054
C053
PU001
F001
CO001
C061
C062
PT001
R076
R074
S1
C060
R069
R070
R073
R075
C055
C059
C052
R053
C051
F-1246
F-1239
F-1244
F-1259
F-1240
C056
R077,078
C057
R063,
064
S10
S9
S4
S3
S5
S6
S7
S2
J002

Sansui

SANSUI ELECTRIC COMPANY LIMITED

Head Office; 14-1, 2-chome, Izumi, Suginami-ku, Tokyo, Japan. TEL. 323-1111

Printed in Japan (00610M2)